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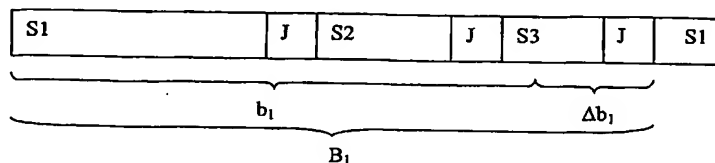
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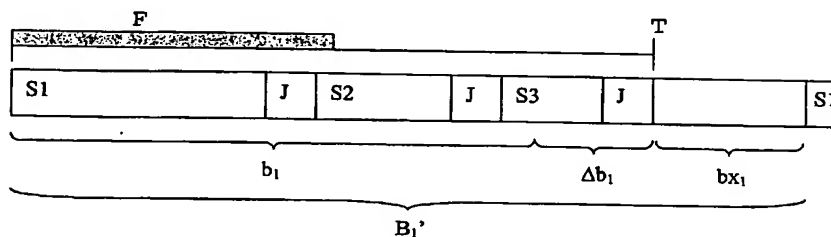
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[Continued on next page]

(54) Title: METHOD FOR CONTROLLING AN OPTICAL PICK-UP FOR READING DATA STREAMS FOR SIMULTANEOUS REPRODUCTION



a)



b)

(57) Abstract: A method for optimizing a scheduler for an optical pick-up reduces the pick-up jump frequency and the initial start-up time for reproduction. The pick-up reads data streams from different files on an optical storage medium, e.g. Blu-Ray disc, and buffers the data streams in separate buffers, e.g. for video, audio and subtitles. Buffer sizes are optimized when the video buffer ( $B_1$ ) is as small as possible, i.e. large enough to bridge the pick-up access and read times for the other streams ( $J, S_2, S_3$ ), and the buffers ( $B_1'$ ) for the lower rated streams are extended ( $bx_1$ ) such that the pick-up access frequency for lower rated streams is an integer multiple of the pick-up access frequency for the highest rated stream, usually the video stream. Initial start-up time is minimized by filling the buffers initially only to a minimum required level.

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